REMARKS

In the Action mailed April 17, 2006, the Examiner rejected all pending claims 1-22. Applicants above have amended claims 1, 10, 11, 19 and 20. As such, claims 1-22 remain pending.

Applicants respectfully request reconsideration in view of the amendments and the following remarks. In addition, Applicant has filed a Supplemental Information Disclosure Statement (IDS) on the same day this Amendment is being filed, and ask that the Examiner review the references cited therein.

Claim Rejections – 35 U.S.C. § 112

The Examiner rejected claims 11-14 and 20 under 35 U.S.C. 112, second paragraph, as being indefinite. In particular, the Examiner contended that in claim 11, the phrase "a time constraint such that no gap is allowed between any two of the first data records and second data records" was indefinite, and noted that claims 12-14 depend either directly or indirectly from claim 11. The Examiner also contended that in claim 20, the phrase "between any two of the data records" is indefinite.

Applicants disagree with the Examiner's positions, but have nonetheless made claim amendments to advance prosecution. In particular, Applicants have amended claims 11 and 20 to clarify further the claimed subject matter, and submit that claims 11 and 20, as amended, are sufficiently definite. Accordingly, Applicants ask that the Examiner withdraw the indefiniteness rejection of claims 11 and 20, as well as claims 12-14 that depend either directly or indirectly from claim 11.

Claim Rejections – 35 U.S.C. § 101

The Examiner rejected all of claims 1-22 (including independent claims 1, 10 and 19) under 35 U.S.C. 101 because the claimed invention allegedly is directed to non-statutory subject matter.

The Examiner stated, with respect to each of the independent claims 1, 10 and 19, that "[t]he language of the claim raises a question whether the claim is directly merely to a an abstract idea that is not tied to an environment or machine which would result in a practical operation producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101."

Applicants disagree with the Examiner's positions, but have nonetheless made claim amendments to advance prosecution. In particular, Applicants have amended claim 1 to specify that the method is computer implemented, have amended claim 10 to specify that the instructions (code segments) on the storage medium are machine-executable, and have amended claim 19 to specify that the associations are made in an electronic database.

Each of the independent claims has a practical application that produces a concrete, useful and tangible result. The practical application is modifying data that makes up more than one timeline, and the concrete, useful and tangible result is a modified version of that data, in a form that takes into account various constraints imposed by grouping values and directed graphs.

Accordingly, Applicants submit that each of claims 1, 10 and 19 meet the requirements of Section 101, and ask that the Examiner remove the Section 101 rejection of claims 1-22.

Claim Rejections – 35 U.S.C. § 103

The Examiner rejected all of claims 1-22 under 35 U.S.C. 103(a) as being unpatentable over Kaiser (U.S. Publication 2005/0010606) in view of Gupta (U.S. Patent 6,415,326). Applicants have amended each of the independent claims 1, 10 and 19 so that the claims define more clearly what is meant by the phrase "grouping values" or "grouping value" as used in the claim. The amendments add no new matter. Support for the amendment appears in Applicants' specification as originally filed, for example, in Figures 2 and 6 and accompanying description.

For reasons that will be discussed below, Applicants' claims 1-22, as amended, define subject matter that is patentable over Kaiser and Gupta. First, Applicants' claims 1-22 are, at a minimum, novel over Kaiser. In addition, Kaiser is, and was at the time of the present invention, subject to assignment to the same assignee, SAP AG. As such, 35 U.S.C. 103(c) forbids Kaiser

from being usable as a reference to contend that Applicants' claims are obvious. Finally, the teachings of the secondary reference, Gupta, do not render Applicants' invention obvious.

The fact that Applicants distinguish their claims from Kaiser should not be taken as an admission that Kaiser is properly considered prior art under any sub-section of 35 U.S.C. 102. Addressing that question is not necessary because Applicants' claimed subject matter is not disclosed in Kaiser, and Kaiser, for the reasons discussed above, is not usable against Applicants' claims in an obviousness rejection.

Claims 1-9

Applicants' claim 1 is directed to a computer-implemented method. The method includes translating grouping values into nodes of a directed graph, wherein the grouping values are associated with periods of timelines, the timelines comprising data records. A grouping value associated with a period of a first one of the timelines being the same as a grouping value associated with a concurrently occurring period of a second one of the timelines indicates that specified data of a data record for the period of the first one of the timelines is to be synchronized with the specified data of a data record for the period of the second one of the timelines. The method also includes distributing data through the nodes to obtain a modified subset of the data records, and re-distributing the data recursively along the nodes to obtain a modified directed graph. The method further includes translating the modified directed graph into a modified plurality of timelines that include the modified subset of data records.

Kaiser discloses techniques for organizing and searching data. (Abstract.) In particular, Kaiser discloses data objects being stored as node of a directed graph. (Paras. 0005 & 0027.) Figure 2 shows an example directed graph 200, which is primarily intended for use in the Human Capital Management and/or the Human Resources field. (Para. 0030.) In particular, the directed graph 200 shows persons at the lowest level node, and a company or group of companies at the highest node. (Figure 2; Para 0029.) A table 100 stored in database system 102 shown in Figure 1 corresponds to the example directed graph 200 shown in Figure 2. (Para. 0027.) Kaiser describes that a common query that may be put to the database system 102 involves determining whether a specific person, such as a person represented by the person object "P2" 224 (Figure 2)

is part of a specific organization. To do this, the table 120 includes a column (namely, the far right column of table 120) for storing path information about each object; that is, the path information column stores a complete path or paths of which the corresponding object is a part. (Para. 0041.) Kaiser describes that over time the path information in the table 120 (last column) may change, for example, when a person is reassigned to a new position or the organizational structure of a company changes. (Para. 0061.) Kaiser describes that the path information may be recalculated on a periodic basis to accommodate any updates, inserts, and deletions made during the intervening time period between when the patent information is recalculated. (Para. 0061.)

Gupta discloses techniques of storing and rendering streaming multimedia content at different speeds, and discloses techniques for correlating timelines of media streams that have been timeline-altered by varying techniques and degrees. (Abstract; col. 1, line 66 – col. 2, line 1.) Gupta discloses that a composite media stream comprises a plurality of individual media streams representing multimedia content. (Col. 3, lines 37-39.) Gupta discloses that the individual media streams have their own timelines, which are synchronized with each other so that the media streams can be rendered simultaneously for a coordinated multimedia presentation. (Col. 3, lines 43-47.)

Neither Kaiser nor Gupta discloses, as required by claim 1, a method that includes translating grouping values into nodes of a directed graph, let alone the translation of grouping values as that phrase has been further defined in the claim, namely, where a grouping value associated with a period of a first one of the timelines being the same as a grouping value associated with a concurrently occurring period of a second one of the timelines indicates that specified data of a data record for the period of the first one of the timelines is to be synchronized with the specified data of a data record for the period of the second one of the timelines.

The Examiner referred to Para. 0005, lines 1-2, of Kaiser as disclosing translating grouping values into nodes of a directed graph. That is not the case, especially in view of the clarification in the claim as to what is meant by a grouping value. Nowhere does Kaiser disclose

the use of grouping values as set forth in Applicants' claim 1 as amended, let alone the translation of grouping values into nodes of a directed graph. The portion of Kaiser to which the Examiner has referred simply states that "data objects are stored as nodes in a directed graph." Data objects cannot be considered to be the grouping values as set forth in Applicants' claim 1.

In addition, the Examiner stated that Gupta discloses, at column 3, lines 38-47, "grouping values associated with periods of timelines." Again that is not the case, especially in view of the clarification in the claim as to what is meant by a grouping value. Nowhere does Gupta disclose the use of grouping values as set forth in Applicants' claim 1 as amended, let alone the translation of the grouping values into nodes of a directed graph. The portion of Gupta to which the Examiner has referred simply describes multiple media streams that have their own timelines. These are not grouping values, especially in view of the clarifying amendment Applicants have made.

As mentioned previously, Kaiser cannot be properly relied upon to reject the claims as obvious, because both Kaiser and the present invention were, at the time of the present invention, subject to assignment to SAP AG. 35 U.S.C. 103(c) prevents the use of a commonly assigned reference in cases such as this. Furthermore, the subject matter of claim 1 provides functionality that is very different from both Kaiser and Gupta. In particular, clam 1 is useful in making sure that when a change is made to data in a database that is set up with grouping values to be synchronized in certain defined ways, that all of the data in the database remains synchronized.

Accordingly, Applicants submit that Applicants' claim 1 is patentable over Kaiser and Gupta, as is dependent claims 2-9. As such, Applicants ask that the Examiner withdraw the rejection of claims 1-9.

Claims 10-22

Independent claim 10, as amended, is directed to an apparatus comprising computer-executable instructions that perform functions that make use of grouping values. Independent claim 19, as amended, is directed to a system comprising means that also perform functions that make use of grouping values. In both of these claims, the phrase "grouping value" or "grouping values" was further defined in the claim.

For the reasons discussed above in connection with claim 1, neither Kaiser nor Gupta discloses the use of grouping values as set forth in Applicants' amended claims. Independent claims 10 and 19 define subject matter that is patentable over Kaiser and Gupta, for reasons similar to those discussed above in connection with claim 1.

Accordingly, Applicants ask that the Examiner remove the rejection of independent claim 10, independent claim 19, and their respective dependent claims 11-18 and 20-22 based on Kaiser and Gupta.

Conclusion

Applicant submits that pending claims 1-22 are in condition for allowance and respectfully requests that the Examiner issue a notice of allowance. In addition, Applicant has filed a Supplemental Information Disclosure Statement on the same day as this Amendment is being filed, and ask that the Examiner review the references cited therein.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue, or comment does not signify agreement with or concession of that rejection, issue, or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.
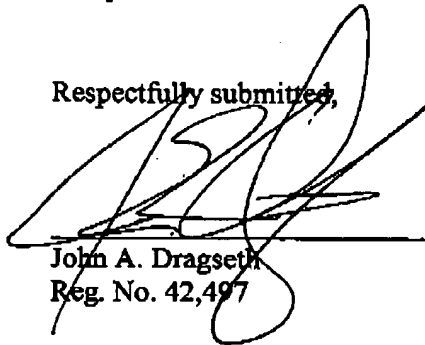
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Examiner is authorized to charge the required petition for extension of time fee of $450 and required fee of $180 in payment of the late submission fee of §1.17(p) to deposit account 06-1050. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

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